

# DM Field Trip

## Red Rock Canyon NCA

Located about 19 miles west of Las Vegas on State Route 159, the **Red Rock Canyon National Conservation Area**

**is a scenic treasure home to a multitude of plants, animals, and geologic features, some of which are unique to the region.**

When the population of Las Vegas numbered only a few tens of thousands, this scenic wonder was known as the Red Rock Canyon National *Recreation* Area, designated as such by the Bureau of Land Management in 1967. As the population ballooned to over two million since the opening of the Mirage Hotel—which heralded the end of the so-called "mob era" and the beginning of corporate Las Vegas—stricter measures had to be taken to better protect this beautiful, but vulnerable, land. Thus, special legislation upgraded the region to a national *conservation* area in 1990, a status that not only enhances the security and integrity of the region's 197,349 acres, but also provides funds used to maintain and protect it. Today, the park lures more than two million visitors each year!

The conservation area lies in the Mojave Desert at the eastern base of the lofty Spring Mountain Range, so called for the 300-plus named springs that emanate from the snow-capped peaks. The lower elevations, from 3,600 to 4,500 feet, are biologically characteristic of the Lower Sonoran Zone that hosts a number of yuccas (Joshua, Mojave, banana), various cacti (prickly pears, chollas, hedgehogs, barrels, etc.), creosote bush, blackbrush, and more. The Upper Sonoran Zone includes elevations above 4,500 feet dominated by juniper, cliffrose, scrub live oak, and ponderosa pines. In fact, over 600 species of plants have been identified in the area, some of which occur nowhere else in the world!

While many photographers and nature enthusiasts are drawn by the flora, others thrill at the sighting of some of the park's faunal residents. While jackrabbits, cottontails, white-tailed antelope ground squirrels, a variety of lizards, and red-tailed hawks are familiar sights, others are not so easily spotted. Lucky visitors may see bighorn sheep, burros, golden eagles, rattlers and other snakes, and rarely a free-ranging desert tortoise.

However, the main attraction, and quite obvious even to the most casual of observers, is the towering 3,000-foot-high cliffs of colorful Jurassic-age Aztec Sandstone, the remnants of a desert that once blanketed a vast expanse of the western portion of the continent about 180 million years ago. Almost completely eroded away save for a few outcrops and exposures, such as found at Nevada's first state park (Valley of Fire), what remains owes its continued existence to another feature that draws geologists from around the world to study.

Beginning about 65 MA (million years ago) during an episode of intense compression that was also responsible for lifting the second-generation Rocky Mountains to prominence (a time known to geologists as the Laramide Orogeny),





**Snow blankets the older carbonate formations that rest atop the younger Aztec Sandstone**

huge slabs of marine strata were not only uplifted above sea level, but also broken and thrust up and over one another. These *thrust faults* placed the old marine strata on top of much younger terrestrial formations. Though the thrust zone extends well into Canada, an easily identified example lies in Red Rock Canyon NCA. Known as the Keystone Thrust, 500-million-year-old dolomite of the Bonanza King Formation (coeval with the Muav Limestone in the Grand Canyon) lies directly atop the 180-million-year-old Aztec Sandstone, forming one of the best exposures of a thrust fault in the world! In time, Nature will inevitably erase this natural wonder in a relentless cycle of creation and destruction.

Regardless of one's particular interests, the **Red Rock Canyon National Conservation Area** has much to offer to satisfy anyone's sense of awe and wonderlust.



**Red Spring Thrust Fault of the famous Keystone Thrust System**



**An ephemeral stream fed by spring snowmelt**



**A heavenly lenticular cloud crowns the La Madre Range**



**Pointing out something of interest at the Visitor Center**



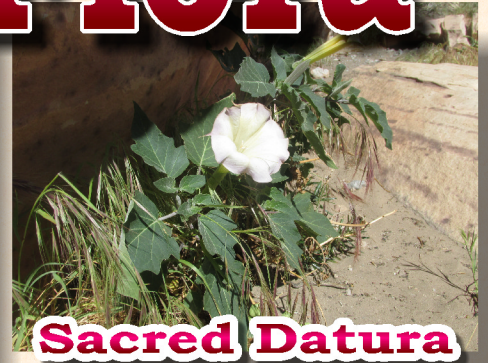
# Red Rock Flora



**California Buckwheat**



**Alkali Mariposa Lily**



**Sacred Datura**



**Desert Prickly Pear**



**Mojave Mound Cactus**



**Desert Spiny Star**



**Crescent Milkvetch**



**Fremont Indigo Bush**



**Desert Four O'Clock**



**Rabbitbush**



**Globe Mallow**



**Paperflower**



**Desert Larkspur**



**Desert Marigold**



**Yerba Mansa**



# Red Rock Fauna



**Mule Deer**



**Desert Bighorn**



**Gray Fox**



**Black-Tailed Jackrabbit**



**Antelope Ground Squirrel**



**Desert Cottontail**



**Red-Tailed Hawk**



**Greater Roadrunner**



**Turkey Vulture**



**Panamint Rattlesnake**



**Gopher Snake**



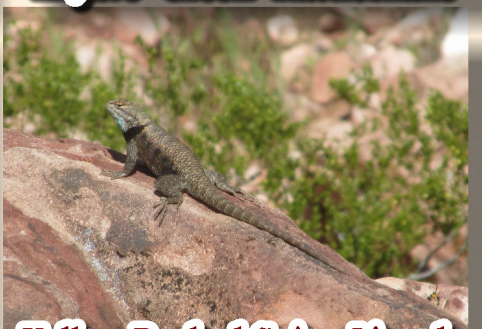
**Mojave "Green" Rattlesnake**



**Chuckwalla**



**Gilbert Skink**



**Yellow-Backed Spiny Lizard**